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The Effect of Globalization on Firm Profits: Do Owners' Race/Ethnicity Matter?

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Small and Medium-sized Enterprises (SMEs)—i.e., firms with less than 500 employees, play an important role in the U.S. economy. SMEs represent 99.9 percent of the 25.8 million businesses and have generated 60-80 percent of net new jobs annually over the last decade. Thus, in order to understand the effect of globalization on the U.S. economy, one has to know how globalization affects SMEs. This paper examines whether firms that operate in more globalized regions earn less profit. We carry out a separate analysis for white-owned and minority-owned firms because the determinants of profits are different for the two types of firms and therefore estimates from an analysis using pooled data will be biased. We use total exports, exports by SMEs and assets of multinational corporations (MNCs) as measures of globalization. Exports by SMEs reflect the extent of globalization-induced competition by small firms and the assets of MNCs is measure of competition by foreign firms and also a proxy for foreign direct investment (FDI) in a region.¹ Furthermore, the measures capture two important aspects of globalization: international trade and FDI.²

Our work is related to the literature that examines the effect of globalization on firm performance (e.g., Jen Baggs, 2005). Many of the studies use trade-related variables as measures

of globalization.³ In addition, the analysis focus on the *within-industry* effect of globalization—i.e., analyze the extent to which globalization in the *industry* in which a firm operates affect the firm's performance. The literature also suggests that the effect of globalization on firm performance depends on firm size (e.g., Mei Hsu and Been-Lon Chen, 2000). However, as pointed out by Baggs (2005), a lack of data has resulted in small firms being understudied. Our analysis extends this literature in three important ways: (i) we add to the thin literature that analyzes the effect of globalization on small firms; (ii) we examine the effect of trade as well as FDI on firm performance; and (iii) we examine the *within-region* effect of globalization—i.e., analyze the extent to which the level of globalization in the *region* in which a firm operates affect its performance. Note that focusing on the *within-industry* effects of globalization as done in previous studies may not capture the full impact of globalization if there are significant spill-over effects to other industries.

Another contribution of the paper is that we employ *firm-level* data from the 2003 Survey of Small Businesses (SSBF) for our analysis.⁴ In contrast most of the previous studies on minority-owned businesses have utilized data from the Survey of Minority Owned Business Enterprises (SMBOE) which is aggregated at the industry, state or metropolitan area level.⁵ Using aggregate data is problematic because it precludes one from analyzing how firm-specific attributes affect firm performance. Furthermore, it raises the potential problem of an aggregation bias. The SSBF dataset contains detailed information about individual firms thus allowing us to examine the effect of globalization on a direct measure of firm performance, i.e., profits. This is an improvement over previous studies that have had to impute profits from data based on aggregate financial information (e.g., Gregory N. Price, 2005). Finally, by using data from 2003 for our analysis, we address the concern raised by John Owens and Robert Pazornik (2003) who

after conducting a comprehensive and the most recent study of globalization and minority-owned businesses note that “an updated survey of minority businesses will be critical to crafting useful policies and helping minority businesses move into the global economy.”

I. Globalization and the Performance of SMEs: A Brief Discussion

We discuss three channels through which globalization can affect the performance of SMEs: linkages, competition and labor market. The linkages between MNCs and SMEs (e.g. outsourcing, transfer of technology and the training of local suppliers) can create business opportunities and enhance the productivity of SMEs. Also, an increase in the number of exporters or MNCs implies more intense competition. However, the overall effect of competition on the performance of SMEs is unclear. On the one hand, increased product market competition may cause SMEs to reduce their price markups. On the other hand, the “learning by competition” analogy suggests that the pressure to survive may speed up the adoption of new technologies and thereby enhance the productivity of SMEs. With regards to the labor market, higher wages paid by multinationals and exporters may have spillover effects to other industries, resulting in an increase in the cost of production for SMEs.⁶ Furthermore, by providing better remunerations to workers, MNCs are able to attract more productive workers, thereby lowering the quality of the employee pool available to domestic firms and possibly reducing average productivity levels. Thus, the overall theoretical effect of globalization on the performance of domestic firms is unclear and therefore has to be determined empirically.

II. The Data and the Variables

The data on firm variables are obtained from the SSBF, a nationally representative sample of 4,250 SMEs that were operating in the U.S. at the end of 2003. The characteristics of the firm owners such as level of education, years of experience, race and ethnicity were created

from a weighted average of the individual owners' characteristics (up to three largest owners), where the weights are ownership shares. We define a business as minority-owned if at least one of the three largest owners is non-white; otherwise the business is white-owned. Our full sample consists of 4,055 firms, of which 376 are minority-owned and 3,679 are white-owned. For confidentiality purposes, information about the location of firms is available only at the regional level. We therefore aggregated the globalization variables at the regional level and scaled them by the GDP in a region to account for the size of the regions. As shown in Table 1, a majority of the businesses (60 percent of minority-owned and 45 percent of white-owned) are concentrated in fairly globalized regions—the Pacific, West South Central and South Atlantic.

The dependent variable is the full year equivalent of firms' total profits in 2003. The literature suggests that firms with more intangible assets tend to be more productive (James R. Markusen, 1995). Following Elizabeth Asiedu and Hadi S. Esfahani (2001), we use sales/assets as an indicator of the firm's richness in intangible assets. We also include the number of employees to examine whether firm size has an effect on profits after controlling for firms' intangible assets. The literature also suggests that the attributes of the owners of small firms, affects the firm's performance (e.g., Timo Lautanen, 2000). We therefore include the weighted average of the years of the owners' management experience and education in our regressions. We also include per capita income to capture income levels in a region. Income per capita may serve as a proxy for the purchasing power in the region, suggesting a positive association between income and profits. However, higher incomes may also reflect the fact that wages and therefore employer cost is higher.⁷ Thus, the overall effect of per capita income on firm profits is unclear. Finally, we include two-digit industry dummy variables to account for unobserved industry effects. A majority of the firms (75 percent minority-owned and 60 percent white-

owned) are concentrated in the services and retail industries. The summary statistics for selected variables are reported in Table 2.

III. Estimation Results

We use a survey-based OLS estimation technique that accounts for complex survey design, stratification, and population weight. This technique uses additional information about the survey design, population weights, and sampling stratification in constructing estimates and it produces unbiased population estimates and standard errors. We estimate equation (1):

$$(1) \quad \text{Profit}_{ij} = \alpha + \theta \text{Firm}_{ij} + \zeta \text{Industry}_i + \beta \text{Globalization}_j + \gamma \ln(\text{Income per Capita})_j + \varepsilon_{ij}$$

where the i 's index firms and the j 's index regions.

Table 3 reports the empirical results. The estimated coefficient of all the three globalization measures is negative and significant at the 5 percent levels for the minority-owned sample, but not significant for the white-owned sample. For both minority-owned and white-owned firms, profitability increases with firm size, firms' intangible assets and the managerial experience of the owners of the firm. However, the effect of education and some of the industry dummy variables (e.g., manufacturing, transportation and services) are different for the two samples. The estimated coefficient of education is positive and significant for the white-owned sample but insignificant for minority-owned sample. Also note that the R^2 for the regressions for the white-owned sample is very low compared to the minority-owned sample: 0.03 compared to 0.20. Indeed, these results lend credence to our assertion that minority-owned firms are in some sense "different" from white-owned firms.

A plausible explanation of our result is that minority-owned firms lack access to mainstream markets and therefore are unable to establish linkages with MNCs.⁸ Our policy recommendation is that policies designed to increase FDI and exports should not only be tailored

to increasing the positive effects of FDI and exports expansion on SMEs but also to ensuring that both minority-owned and white-owned firms have equal access to the benefits of globalization.

Table 1— GDP per Capita, Globalization Measures and Distribution of Firms by Region

Region	GDP per Capita (\$)	Total Exports/ GDP (Percent)	SME Exports/ GDP (Percent)	MNC Assets/GDP (Percent)	White- Owned (Percent)	Minority- Owned (Percent)
New England	34,010	5.85	1.72	9.74	6	2
Middle Atlantic	35,223	4.54	1.95	9.48	12	11
East North Central	30,071	7.55	1.56	11.19	16	10
West North Central	28,765	5.20	1.23	6.47	9	4
East South Central	25,156	7.86	1.56	13.82	5	7
West South Central	25,816	12.29	3.13	14.32	9	12
Mountain	27,705	4.98	1.04	7.64	8	5
Pacific	31,217	8.48	2.93	10.71	16	26
South Atlantic	31,474	5.15	1.62	8.64	17	22

Notes: The regions are New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont); Middle Atlantic (New Jersey, New York, Pennsylvania); East North Central (Indiana, Michigan, Ohio, Wisconsin); West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota); East South Central (Alabama, Kentucky, Mississippi, Tennessee); West South Central (Arkansas, Louisiana, Oklahoma, Texas); Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming); Pacific (Alaska,

California, Hawaii, Oregon, Washington); South Atlantic (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia)

Table 2 — Summary Statistics

Variable	Minority-Owned (376 Firms)		White-Owned (3679 Firms)	
	Mean	Std. Dev.	Mean	Std. Dev.
Profit (\$100,000)	4.83	33.97	4.98	35.55
Log (Sales/Assets)	0.98	1.51	1.03	1.37
Number of Employees	26.8	54.78	31.4	56.83
Education (Years)	5.04	1.87	4.68	1.87
Managers' Experience (years)	17.83	10.37	21.78	11.52

Table 3—Effect of Globalization on Profits

(Dependent Variable: Firm Profit (\$100,000). Robust P-values in Parenthesis)

Variables	Total Exports		SME Exports		Assets of MNCs	
	Minority-owned	White-owned	Minority-owned	White-owned	Minority-owned	White-owned
Globalization	-0.462** (0.018)	0.084 (0.400)	-1.457** (0.013)	0.373 (0.238)	-0.390** (0.023)	0.067 (0.450)
Log (Sales/Assets)	1.090** (0.015)	0.418** (0.010)	1.113** (0.014)	0.417** (0.010)	1.111** (0.014)	0.418** (0.010)
Number of Employees	0.096** (0.015)	0.110*** (0.000)	0.095** (0.016)	0.110*** (0.000)	0.094** (0.016)	0.110*** (0.000)
Education	-0.300	0.224***	-0.331	0.222***	-0.347	0.225***

	(0.462)	(0.006)	(0.432)	(0.007)	(0.416)	(0.007)
Managers' Experience	0.178**	0.025**	0.176**	0.025**	0.176**	0.025**
	(0.034)	(0.029)	(0.036)	(0.027)	(0.037)	(0.028)
Manufacturing	0.347	-3.081**	0.392	-3.058**	0.409	-3.081**
	(0.794)	(0.045)	(0.770)	(0.046)	(0.757)	(0.044)
Construction	-3.059**	-2.673*	-3.062**	-2.647*	-3.110**	-2.675*
	(0.045)	(0.073)	(0.043)	(0.074)	(0.031)	(0.073)
Transportation	6.891	-3.232**	6.715	-3.212**	6.699	-3.225**
	(0.161)	(0.033)	(0.178)	(0.033)	(0.177)	(0.033)
Finance	15.093*	-0.332	14.820*	-0.314	15.320*	-0.322
	(0.064)	(0.862)	(0.070)	(0.869)	(0.067)	(0.865)
Retail	1.645	-2.698*	1.642	-2.682*	1.658	-2.703*
	(0.205)	(0.076)	(0.211)	(0.078)	(0.208)	(0.076)
Service	0.002	-3.647**	0.014	-3.637**	0.186	-3.649**
	(0.999)	(0.016)	(0.991)	(0.016)	(0.883)	(0.016)
log (GDP per Capita)	8.375	-0.788	15.244*	-2.118	8.055	-0.980
	(0.240)	(0.607)	(0.088)	(0.221)	(0.295)	(0.491)
Constant	-86.501	9.330	-158.28*	23.069	-82.215	11.234
	(0.242)	(0.566)	(0.088)	(0.210)	(0.306)	(0.456)
R ²	0.204	0.032	0.202	0.033	0.200	0.032

Notes: * significant at 10 percent; ** significant at 5 percent and *** significant at 1 percent.

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¹ We use assets as a proxy for FDI because data on FDI are not available by region.

² There are three aspects of globalization: trade, foreign direct investment and immigration.

³ A few exceptions include Mei and Chen (2000) who use both FDI and exports as measures of globalization to analyze the effect of globalization on labor productivity of SMEs in Taiwan.

⁴ The data are available at <http://132.200.33.130/pubs/oss/oss3/nssbftoc.htm>.

⁵ A few exceptions include Timothy Bates (2001).

⁶ Robert E. Lipsey (1994) finds that MNCs in the U.S. pay higher wages and that wages are higher in industries and in states that have more foreign firms. Andrew Bernard and J. Bradford Jensen (1999) also find that exporters pay higher wages than non-exporters.

⁷ We also experimented with the share of workers that belong to a union as a measure of labor cost; however, it was not significant.

⁸ Bates (2001) attributes the lack of access to markets to discrimination. Gregory R. Lanoue (1995) on the other hand argues that minority-owned firms do not have the capacity to compete in the market place.